from 2.2 g/d to 0.2 g/d in women. Mean energy intake from ITFA was likewise decimated, falling from 1.11%E to 0.17%E in both men and women. Eleven hundred and ninety-three fewer CHD deaths (BEST UI 1,149 – 1,688), were poten-
tially attributable to the ITFA reduction, representing some
11% of the overall 11,100 CHD mortality fall in Denmark
between 1991 and 2007. The greatest attributable mortality
falls were seen in the most deprived quintiles (reflecting their
bigger reductions in ITFA consumption). Adding ITFA data
to the original IMPACTsec model improved the overall
model fit from 64% to 73%. The major contributions to the
fall in CHD mortality remained consistent across a wide
range of sensitivity analyses.

Conclusion Denmark’s mandatory elimination of ITFA was
very effective. Furthermore, it may well have accounted for
approximately 11% of the substantial reduction in CHD
deaths achieved between 1991 and 2007. The most deprived
groups benefited the most, thus reducing inequalities. Adopt-
ing the Danish ITFA regulatory approach elsewhere could
substantially reduce CHD mortality while also improving health
equity.

OP10 PREVALENCE AND SOCIO-DEMOGRAPHIC ASSOCIATIONS OF DIET AND EXERCISE RISK-FACTORS FOR NON-COMMUNICABLE DISEASES IN BO, SIERRA LEONE

Tahir Bockarie*, 2Maria-Lisa Odland, 3Haja Wurie, 4Rashid Ansumana, 5Joseph Lamin, 6Miles Wiltham, 7Oyenlola Oyebode, 8Justine Davies. 1Warwick Medical School, University of Warwick, Coventry, UK; 2Institute of Applied Health Research, University of Birmingham, Birmingham, UK; 3College of Medicine and Allied Health Sciences, University of Sierra Leone, Freetown, Sierra Leone; 4School of Community Health Sciences, Njala University, Bo, Sierra Leone; 5Mercy Hospital Research Laboratory, Mercy Hospital, Bo, Sierra Leone; 6NIHR Newcastle Biomedical Research Centre, Newcastle University, Newcastle, UK

Background Little is known about modifiable dietary and physical activity risk factors for non-communicable diseases (NCDs) in Sierra Leone. This information is critical to the
development of health improvement interventions to reduce the prevalence of these diseases.

Methods Adults aged 40+ were recruited from 10 urban and
30 rural sub-districts in Bo. We examined risk factors including:
<150 minutes of moderate and vigorous-intensity physical
activity (MVPA) weekly, physical inactivity for >3 hours daily,
<5 daily portions of fruit and vegetables, and salt consumption
(during cooking, at the table, and in salty snacks). We used
logistic regression to investigate the relationship between these
outcomes and participants’ socio-demographic characteristics.

Results 1,966 eligible participants were included in the study.
The prevalence of behavioural risk factors was 83.1% for <5
daily portions of fruit and vegetables; 40.8% and 91.9% for
adding salt at the table and during cooking, respectively and
30.6% for eating salty snacks; 22.4% for MVPA <150
minutes weekly, and 43.9% for being physically inactive >3
hours daily. Multivariable analysis showed that urban individu-
als were more likely than rural individuals to consume <5
daily portions of fruit and vegetables (Odds Ratio (OR) 1.06,
95% Confidence Interval (1.00–1.11)), add salt at the table (OR
1.86 (1.80–1.92)), eat salty snacks (OR 2.03 (1.97–2.11)) and
do MVPA <150 minutes weekly (OR 1.17 (1.13–1.22)). Male
individuals were more likely to add salt at the table (OR
1.25 (1.21–1.29) and consume salty snacks (OR 1.36
(1.32–1.41)) than female individuals but were less likely to
report the other behavioural risk-factors examined). Increasing
age was associated with higher odds of eating <5 daily por-
tions of fruit and vegetables daily; adding salt at the table;
eating salty snacks; doing <150 minutes of MVPA per week and
physical inactivity >3hours. Generally, people in lower
wealth quintiles had higher odds of any of the risk factors
than those in the highest wealth quintile.

Conclusion Dietary risk factors for NCDs are highly prevalent,
particularly among urban residents in Sierra Leone. Our find-
ings show that forthcoming policies in Sierra Leone need to
consider modifiable risk factors for NCDs in the context of
urbanisation.

This study used data from Cardiovascular Disease (CVD)
Risk Factors in Sierra Leone, which was supported by a Small
Grant from the Wellcome Trust, grant number 209921/Z/17/
Z.
(95% UI: -5000 to 39,000), 32,000 (95% UI: 9,500 to 56,000) and 17,000 (95% UI: -7200 to 37,000) respectively. Compared to the baseline, no scenario was more cost-effective nor reduced health inequalities; in all cases the probability of becoming cost-effective or equitable did not reach 80%.

Conclusion Results suggest the intervention has the potential to reduce T2DM incidence but requires substantial participation and increased long-term effectiveness. The effects in other NCDs, cost-effectiveness and health inequalities were uncertain. Whilst reduction in T2DM is encouraging, a combination of high-risk and structural policies is needed to reduce the health inequalities gap and address the NCDs crisis, which is urgently overdue.

Wednesday 15 September

Children, 13.00 – 15.25

OP13 EARLY CHILD DEVELOPMENT AT 2–5 YEARS PREDICTS COGNITIVE OUTCOMES AT 6–9 YEARS IN LAO PDR: A CASE FOR POPULATION MONITORING USING THE EARLY HUMAN CAPABILITY INDEX IN LOW AND MIDDLE INCOME COUNTRIES

1Aljanna Sincovich*, 1,2Tess Gregory, 1,2John Lynch, 1,2Sally Brinkman. 1School of Public Health, University of Adelaide, Adelaide, Australia; 2Telethon Kids Institute, University of Western Australia, Adelaide, Australia; 3Population Health Sciences, Bristol Medical School, University of Bristol, Bristol, UK

Background Beyond effects of linear growth on cognitive development, research has seldom focused on children’s developmental trajectories in low and middle income countries. This is limited by a lack of suitable measurement tools. Global commitment to tracking early child development, as outlined by the Sustainable Development Agenda, has spurred efforts to address this challenge. The early Human Capability Index (eHCI) has been shown to be a feasible and valid population monitoring measure across diverse contexts. This study investigated the comparative ability of the eHCI and direct assessment of children’s development at 2–5 years in predicting cognitive outcomes at 6–9 years.

Methods We used data collected as part of the Early Childhood Education Project, financed by the World Bank Group, in Lao PDR. Baseline data collected commenced in 2015. The sample was drawn from 376 villages in Northern Laos selected on the basis of poverty level. In each village, 20 random households with at least one child aged between 2–5 years were selected. In 2020, children within the age range of 6–9 were surveyed again. The study population included all children for whom data were collected at both time points (n=5,269). Four measures of children’s development were used in this study; eHCI overall development, and direct assessment literacy, numeracy, and executive function. The eHCI, collected via caregiver report, includes 56 items designed to measure early child development across 8 domains. Children’s literacy, numeracy, and executive function were measured via 92 direct assessment items. Receiver Operating Characteristic (ROC) curves, C-statistics and 95% confidence intervals were estimated to determine the ability of scores at time 1 to predict poor scores at time 2.